Yi 2
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p 30.

On the remote Causes of diseases
insensible qualities
from &c in the Air — cont.

~~exposed~~ them when formed, to be
carried off by fresh Air, and in the latter
case to the disposition of those ~~men~~
to crowd together in the hold of the Ships
in order to protect themselves from the
cold and Damp Air. Even the military
Hospitals in hot Climates are seldom
visited with fevers from human Miasmata. Dr Hunter informs us that
during two years in which he had the
charge of a military hospital in Jamaica
he did not see a single case of it.

3 Human Miasmata adhere to clothing
of all kinds, more especially to linen & woolen
whether Apparel or Curtains for days, weeks
and even months, during which time they

V These facts are of great applications
in the practice of physic.

retain their Activity so as to be able to ~~propagate~~ produce fever. ~~the Disease by inducing Contagion~~. I once knew a stocking that had been worn by a man in a fever from human Miasmata, convey that disease to one of his fellow servants who tied it round his neck several days after it had been thrown aside, and I have heard of a convict in Stafford County Maryland, who came to that State when a British Province in a Ship infected with that fever, who nearly destroyed a whole family by ~~wearing a~~ taking a coat or Waistcoat out of his Chest, and wearing it about the house three months after his Arrival & Connection with the family. But this is not all, these Miasmata adhere to wood, and perhaps to brick and Stone walls. There was an

an instance of a Worden hospital at the
Yellow Springs in this State which retained
the seeds of this fever for five months
a number of soldiers who were sent to it,
during the revolutionary war. Dr Willan
mentions an instance in which these miasm-
=mata were retained in an active state for
Several years in some houses in Woods Close
Clerkenwell in the city of London. Similar
facts are related by Dr Clark. We are prepared
by them to believe the Amounts that are given
in the Old testament of the Leprosy of the
the infection of
Jews which adhered with so much tenacity
to the walls of this houses as to make
destroy
it necessary to them in order to destroy the
infection. It is unashable the contagion
of the fever from human miasmata does
not adhere to white washed walls, nor to w

V It was communicated in this
way Mr Fuller tells us in his
ecclesiastical history on the 23rd of
June in the year 1557 in Oxford
in great Britain. A certain Row-
linkins a popish bookseller was
brought from jail in which he had
been closely confined and publickly
convicted of dispersing a seditious
pamphlet. Of the persons who were
present at his trial 300 were infected
by him and died, and 200 more were
infected and Died out of the Court house by them
who had received the disease from those
who were infected in it. Of these 500
there was not a single woman or child.
Against Sir John Pringle informs us

ground floor. The former has been proved
by Mr Howard in his Account of Lazarettos,
and the latter by Count Saxe in his Reveries
upon the Art of War, and hence he always
~~has~~ forbad the ground of his Military
Hospitals to be covered with Wood, or any
Other matter. Dr Lilton followed his practice
and Advice in the Construction of his Hut=
=Hospitals near Pennistown in the year
1780, and with singular Advantage to
the Soldiers of the American Army.

4 Persons highly impregnated with retained &
vitiated perspiration sometimes infect Cities
people without being infected themselves. ~~It~~ that
it
was Communicated by some Criminals brought
from prison ~~in their Cloaths~~ to the old Bailey
~~to forty-thousand~~ on the 15th of May 1750
to four Judges, two or three Lawyers, one

V Analogous to these facts. There was a man some years ago in New Jersey who was incapable of being poisoned by the common poison Vine of our meadows, who never failed to infect his wife with it after handling, or being otherwise exposed to it.

5. Persons sometimes affect themselves from their own confined perspiration. Solitary fevers are often induced in this way.

Sheriffs, several Jurors and to as many others as made the whole number who did sit amount to forty persons. no one of the Criminals was seen indisposed with it.

6 Idio. or human. Miasmata are much aided in their operation upon the body by means of Cold. It was observed that those persons who sat near a Window and who were exposed to a Cool Current of Air at the Old Bailey in the Case just now men- tioned, were the greatest sufferers by the fever. Cold was often the exciting cause of the fever generatedin the American Hospitals during the revolutionary war. This was most obvious when the soldiers were removed in Cold weather to prevent

their falling into the hands of the British Army. Three fourths of them ~~those who~~ ~~were thus seized~~ generally sickned soon afterwards with the hospital fever.

The Feeble and debilitated persons are most subject to this fever from human miasmata. Convalescents from other diseases, and in some instances from this fever, were most frequently affected by it in the military hospitals during the revolutionary War.

It has been remarked that pregnant Wo=
=men, and persons who labour under pain=
=ful Abscesses frequently escape this fever even in the most exposed situations. The stimulus of distention in the former Case of pain in the latter, protect the System

the Disease.

from ~~infection~~. After parturition, or the opening of ~~the~~ the Abscess; the same persons are often affected with this fever.

& Depression of mind from grief, and fear ^ not only generate the this fever from human miasmata, but predis= =pose to it from all its other Causes.

10 I have hitherto spoken only of the mor= =bid effects of the miasmata emitted from human bodies, but many animals under circumstances of Confinement & bad diet, emit miasmata which produce disease. One instance of it is mentioned by Dr Lordyce as having occurred on board of a Ship in which a number of Sheep and Hogs were sent from Great Britain in the year 1778 to New York in order

V 11. They are seldom communicated no further than ten feet from persons infected with the fever.

11 American Army: While the fever induced by them in the common Soldiers (previously worne down by fatigue, or bad provisions,) ~~they~~ required Bark & Wine to cure it, it could not be cured without one or two bleedings in the lusty ~~subjects~~ debilitated and better fed Officers of the Army; & of the well fed Citizens that caught the disease by being exposed to it.

to supply the British garrison in that
city with fresh ~~provisions~~ aneimal food. V.

Let us now attend to the manner in
which these miasmata act upon the hu=
=man body and the different forms of dis=
=ease produced by them.

1 In the ~~bottle~~ sanguiferous system they produce fever
which is ~~usually~~ of a typhus and chro=
=nic nature, except in those few cases
in which they attack persons of robust
habits. ~~It is seldom required to~~
~~cure it.~~ In this way they acted in the Au=
=V.

2 They affect the nerves with Stupor, the
muscles with tremors, the head with
pain, and the mind with a low degree
of deliriums.

3 They affect the Alimentary Canal with

Dysentery. This has often been Observed in
besieged towns, and crowded Ships.
5 This sometimes produces the Influenza. An
account of this disease from individuals
=mata on board the British ships
Belleraphron is mentioned in the
4th volume of Bellamys medical journal.
a similar account of an Influenza or
Catarrh from the same cause on
board the American Frigate Philadelphia
is taken notice of by Dr Champney in
his inaugural dissertation published in
the year 1805. It preceded a Dysentery
which prevailed on board that Ship.
6 These emanata sometimes induce
the Scurvy - proofs of which have been
laid before the public by Dr Clairborne in

virangeal Dispensation upon that Disease
published about the year 1799.

The fever and Dysentary which are derived
from these exhalations sometimes propa-
-gate themselves by Contagion. Contagion is of two
kinds - a secreted matter such as takes
place in the Small pox and measles - and
an excreted matter which is formed by
a new and vitiated organization
of a portion of the Animal fluids. The
fever and Dysentary from human miasmata
are propagated only in the latter way. They
from the sick,
never extend more than ten feet - they
never pervade the Atmosphere as to pro-
induce
-duce an epidemic, and they
disease only in Jails, Hospitals, prison
Ships - crowded Ships, and in the small
and filthy huts of poor people. —

That there is nothing Specific in the
matters which thus produce fever & Dysentery
I infer from this ever producing uniformly
the same form of disease. Thus The excretions
from a patient in fever induces a Dysentery
in another person and vice versa. In Others
~~persons predisposed to~~ diseases are excited
by them when they act upon persons
predisposed to those other diseases. V

Thus have I pointed out all the dis-
=eases which appears to be the Offspring
of Miasmata exhalations: whether
from derived from the living bodies of
men or brutes. It is still supposed
them to be the same as produced
Miasmata, and has given to
both the Name of Typhus to which be

V 6. The functions of the brain, and
nerves and sensations of the muscles
are equally impaired.

describes qualities of an acrid nature. I cannot assent to this opinion while I recollect the immense difference between the hospital fevers (of which I am general thereis and instances in the military hospitals of the United States during the revolutionary war), and the yellow fever which has at often appeared in our city since the year 1793. The fever from Pestilence differs from the fever from Contagion in the following particulars. 1st It prevails chiefly in Cool and Cold weathers. 2 It affects persons of debilitated habits chiefly, and ravages our gradually. 3 It is seldom attended with a discharge of bile or even with a Sick Stomach. 4 Its remissions are scarcely perceptible. 5 The pulse is seldom above a typhoid Action, and the last moderate. 6 It

† the Synonames of Jail, Hospital, Camps & Ships fever.

V functions of the Brain ~~& nerves &~~
muscles are much less impaired in it,
than in an Idiomatic fever. ¶ It
~~is~~ generally terminates when it assumes
the form of a Remittent in 3. 5. 7. 9. or
11. Days. ~~But when it~~ Rarely it assumes a
Chronic form and continues 15 - 20 &
30 days. § It is never Contagious except
when it assumes a Chronic form. ¶ It is
destroyed by heavy rains high Winds and frost. 10.
It is known by the names of bilious fever-
yellow fever - Remitting & intermitting fever,
and Autumnal fever.

usually continues -10- 15 - and even 30
Days. 8 It propagates itself from its excretions
and particularly from by perspirations. 9 It is
checked by warm weather. 10. It is known by
the fever from which symptoms appears
This fever from Various circumstances and with Signs the
under Circumstances and with Signs
reverse of those which have been mentioned. 11 It
prevails chiefly in the the Summer & Autum-
=nal Months, & in Climates uniformly
warm at all Seasons. 12 It attacks
persons of robust habits chiefly & for the most
and Vernal
part suddenly. 13 It is attended with Tiredness
of discharges of bile, or a total obstruction
of the excretion of bile, and sometimes of
its excretion. 14 It is attended with obscure
intermissions or remissions. 15 the pulse
is generally hyperthus fortis or acutis, or
typhoid, and the heat of the skin generally
above its natural temperature. 16 The

While I thus maintain this remarkable difference between the fevers from Marsh=
& Bilio=miasmatic exhalations, I admit
the fevers
that ~~bilious~~ sometimes act upon the body while it is impreg=
=nated with the latter, and thus produce a
Skin and several
~~Kind~~ fever with a yellow Other bilious Symptoms. De Gromoe in
his treatise upon the Diseases of the British
Army, and Lempriere in his Account of
the diseases of Jamaica describe this
mongrel
~~double~~ fever of ~~double~~ fever. Sailors
who arrive in the West Indies in ~~Ships~~ crowded
in apparent health, but
& sickly Ships ~~often affected~~ where
bodies are impregnated with human
miasmata, are often affected with it.
or mongrel
This heterogenious fever is sometimes
propagated by the Contagion of excretion,

V I shall now add that reason
and experience are equally competent
to prevent all the diseases from
miasmata or idio miasmatic exha-
=lations. The United States of
America have furnished a striking
proof that the universal preva-
=lence of —— p 47.

and hence has arisen the error of the contra=
=gious nature of the yellow fever in the west
Indies.

I said formerly that no Climate however
cold or hot is necessarily unhealthy. When
the extremes of the weather are opposed by
suitable dresses, and other recommendations
which reason and experience ~~has~~ suggested
to obviate their pernicious and morbid effects
upon the body. I have said the same thing
~~of~~ countries and places that are un=
=healthy from those ~~causes~~ circumstances
circulations. V. Could the superstitious belief
in the exclusive origin of fevers from
those two sources, be banished from
medicine, & universal cleanliness

And the United States have
provided a proof that the
Universal pervades =

~~les introduced into our Cities, Villages or~~
~~Country Situations~~ - houses & persons
by means which are within our power,
miasmatic fevers
~~from those that~~ would soon be
~~have been~~ blotted out
~~Eliminated~~ from the list of diseases. Hol-
-land once the hot bed of fevers from Mias-
-matic exhalations has been made
healthy by the extraordinary Cleanliness
of the Inhabitants of that Country, and
fevers from Miasmatic exhalations
have been nearly Driven out only from
the houses of the affluent, but from
hospitals and Gaols in Great Britain
by removing all their remote ~~& proximate~~
and the United States have in
Cases. ~~Hospitals, &c~~ the universal practice

~~Comfortable &c~~ of ~~insufficient~~ ample accommodations
even for the poor, ~~the~~ of Domestic Clean-
liness, - of a plentiful or competent
supply of wholsome Aliment, - of Content-
ment, & peace in the United States are
the certain means of preventing
~~defended them~~ from the fevers which
originate in human miasmata.

~~may this happy~~ State of our Country continue
~~till time shall be no more!~~

~~go to p. 109 of 2d 3 - on pathology.~~

We proceed to mention other sources of the
unhealthy qualities of the atmosphere from
the mixture of foreign matters with it. They are
III. ~~Air~~ the matter discharged from the lungs
in Respiration. This has been called Azote &
Nitrogen by the Chemists. ~~phlogisticated air.~~ When confined,
or undiluted with common air it produces

III The matter which produces the Influenza Comes next under our notice. I know this Disease is classed such as are with Contagious, and many other Physicians. But I believe its remote Cause to be seated in some irritating matter in the Atmosphere, and that it spreads independantly of any intercourse of the Citizens with each other. My Reasons for this Opinion are as follow. 1 The rapidity with which it spreads thro' different Countries, and frequently thro' large Sections of the Globe. 2dly in this respect it partakes, tho' in a greater degree of the Manners in which Citizens of the same Town & other Atmospherical Diseases

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Spread through Villages. Cities and
Countries. The fourth part of Mankind do
not perhaps with a ~~fifth~~ fiftieth part of their
Celerity thro' a Country.

2 I infer ~~it from~~ the Infection
not to spread by Contagion from its
having ever been traced to any one
spot from which it could be said
to originate. It often begins in two
or ~~three~~ places at one & the same
~~time~~ time.

3 - I infer it from many families
& individuals living ~~differed~~ differed with the
Disease who had had no intercourse
in any way with affected persons.
Even Sailors have been affected by it
remote from the shore at the ~~time~~ time
it has prevailed upon Land. —

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To these facts, I know it is objected that it has often been traced to an individual coming into a family or town. Where this has been the case, how it may have been occasioned by the breath of the affected persons ex= =ting the disease in persons unprej= =udiced with the matter of the infectious & thus predisposed to it — or 2dly the matter discharged with the breath of the affected persons may have undergone such

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a Change from a diseased state of the
lungs, or from the long Duration of the
Influenza
~~Disease~~, as to produce the same Affection
in one or more members of a family
or neighbourhood. The Glanders &c.
=tainly spread by Contagion among
horses, but it is only when they travel,
or are stabled together. They never
spread in an imperceptable manner
thro' a Neighbourhood. A Circumstance
contributes to render this Disease Conta=
=gious in horses that Does not take
place in the human Species & that is
only this this Does in Consequence of
which more inflammation is excited, &
a more acrid matter is secreted by the
Many in the Influenza in Men.
membrane of the Nose, & It is so acrid
sometimes as to ~~corrode~~ affect even the
bones of the nose, or by the Choco
in which the Disease has been supposed

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to have spread from Contagion may
be from accidental Coincidence. Such
as often takes place in intermitting
& bilious fevers & Opthalmia. — I shall
hereafter mention instances of whole
families being affected by palsy - Epis-
= lepsy - and even fore legs; and surely no
one will say any of these diseases
are propagated by Contagion.

But another & a much
stronger Argument in favor of the
Influenza spreading by Contagion is
derived from a fact
mentioned by the Revd Mr
M'Aulay in his history of St Kilda,
a small Island on the Western Coast
of Scotland. He says that every time
a Stranger visits that Island a Catarrh
or Influenza affects all its inhabitants
of the Isle within three Days afterwards.

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This ~~This~~ This fact may be explained
~~Dow~~ by resorting to the one assum-
-tioned by Dr Blane - Viz: the production
of fever by the first intercourse of
Sailors in a Ship, ~~for~~ by the accession
of new recruits to the Crew of a
Ship. It is true a fever is not excited
by the visit of the Strangers to the
Island of St Kilda, but a disease is
produced which sometimes pseudo
fever, or is a substitute for it on
board of Ships. ~~He~~ The former occurred in the
the Philada Frigate, ~~formed~~ of the
latter in the British Ships Bellero-
-phron formerly mentioned. Take
notice the disease indeed in all the
two Ships & on the Island of St Kilda
was limited in its extent. ~~and~~
It was not propagated by either of the
Ships to the ports or Coasts they

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visited, Dr M'Cauley does not
mention that the Catarrh when
existed on the Island ever spread to
adjacent islands, or to the Coast of
Scotland. —

IV. We come now to say a few words
upon those Matters ~~in the last~~ which
produce which are ~~supposed to be~~
~~=ginate~~ in the human body, and
after mixing with the Air propa-
=gate themselves in it, and produce
a similar Disease in other bodies.
They are called Specific Contagions.
They were formerly said to be very
numerous. They are now very
much limited. The Small Pox,
the Measles, the Chicken Pox and
the Hooping Cough are the only
Diseases which can confidently
be said to be propagated by Specific

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contagion. Even these have lately been supposed from some facts brought to light by the researches of Mr. Webster to originate in a peculiar & morbid State of the Atmosphere. The Cynanche Malig-
=na, & Scarlatina are most probably atmospherical diseases. When they spread by Contagion, which they occasionally do, it is probably from the highly diseased States of the organs thro' which the breath passes in Respiration. Mr Webster I have said supposes they are derived from the same Miasmata which produce Paris
=miasmatic fevers, - if this be the case those miasmata must lie a great while in the System, or leave left a predisposition to a disease upon the throat & skin behind them, for they

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V It is peculiar to these contagious diseases to be taken but Once in the Course of life. ~~with one exception~~ There is now to this an exception to this remark. The matter from which the Contagion is formed appears to be a secretion.

appear in winter as well as in
Summer, & in Dry as well as in
wet Weather. Perhaps they may be
=thing but the malignant, or gan=
=grenous grade of ~~a fever~~ the common
inflammatory Angina, ~~but~~
changed by what I shall presently
call an inflammatory Constitution
of the Atmosphere to a malignant
state. A Catarrh is induced by Mio=
=miasmatic exhalatives - why may not
a Cynanche Maligna be induced by Mio=
=miasmata?

The Small pox. measles, Hooping
Cough, and Chicken pox all produce
themselves without the Cooperation of
an exciting Cause. In this, they differ
from the fevers from Mio. and
Mio miasmatic exhalations which
for the most part require the aid
of an exciting cause to produce them.
(though sometimes it)

Under this head I shall barely

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mention those diseases which are ~~admitted~~ propagated from specific matters by Contact only. They are the Itch, the Venereal Disease, Ringworms & perhaps some other Diseases of the Skin. They spread by a fixed matter. ~~The small pox~~ The small pox = ries, Hooping Cough & Chicken pox spread by means of a Volatile matter. The former have been called infectious; the latter contagious Diseases. Some of them spread by infection as well as contagion — as the small pox, and

~~I~~ We proceed to mention other Sources of the unhealthy qualities of the Atmosphere from the mixture of foreign matters with it.

V. The matter discharged from the lungs in Respiration. This has been called Azote — Nitrogen — Septon & phlogisticated Air by the Chemists. When confined, or undiluted with common Air it produces

all heard or of the ~~Death~~ of English small pox Dr Hales ~~of Death~~ themselves the house vate Debate, ishing with ~~impose this~~ V afterwards. ntracted by derived chiefly g living over phlogisticated ot go into

V ~~Out~~ Of 7650 Children born in the Lying in Hospital at Dublin 2944 died within 9 days after their birth. That they perished from the confined ~~impure~~ air discharged from the lungs, we infer from the mortality being ~~great~~ very much lessened by the ~~on~~ the rooms being less crowded afterwards; so that the deaths were reduced to but ~~lost~~ 1 in 3.

a disease and death. Upon hare all heard or
read of the melancholy account of this dreadful
sufferings and death of a number of English-
=men who were confined in a small room
called the Black hole at Calcutta. Dr Hales
mention to Dr Franklin an instance of
in 3 persons out of 4 who seated themselves
near a hole in the ceiling of the house
of Commons in England perishing with
fever in consequence of the impure air
which is found to be / own afterwards.
The sickness which is often contracted by
children in crowded Schools is derived chiefly
from the air of the Schoolroom being over
charged with azote, or phlogisticated
air. I know a lady who cannot go into

a crowded room to pay an afternoon visit
without being affected with a giddiness in
her head, and I have known a gentleman
who was subject to the Gout who always
felt in the same situation a disposing
pain in his Returns. The Epilepsy often
attacks in a crowded room - hence
its name of "morbus Comitialis", or
the disease which attacks in Company.
The phlogisticated Air is its exciting cause.
~~Of this Disease in~~ It is always
more unhealthy in Companies which
are numerous in the night, than in the
days from its being combined with the
Air which has been consumed by
Candles, or other artificial lights. It is still

more unhealthy when persons who are confined labour or exercise, than when they sit still. ~~This has been demonstrated by the experiments made by~~

~~the~~ the Carbonic acid ~~gas~~ which is discharged from ~~lungs~~ the calcarious earths, alkalies, Charcoal, and fermenting bodies produces giddiness, Head ach, nausea, convulsing and death. This acid acts Specifically upon the lungs, for in the stomach it is cordial and medicinal in a high degree. The lungs of Animals which have been destroyed by it are sometimes so completely collapsed as to sink in water. This fact should be recollected when we are called upon to examin whether children

have been still born or destroyed after birth,
for if by any accident they should have
inhaled a portion of this Gas, their lungs
will exhibit the same ~~appearances~~ phenomena
phenomena as if they had never breathed.
From its greater Specific Gravity than
atmospheric air it exists near the surface
of the earth where it often proves fatal
to Dumb and ruminating Animals
than to man. The Grotto del Cane
~~Grotto~~ near Naples which always abounds with this
Gas Derives its name from its fatality
to dogs. — Mr Bruce tells us in his travels
that in the town of Sennaar ~~and~~ upon the
Nile, and several miles around it ~~in the~~
the earth emits an Air which is fatal to
all Animals except to man probably

because he is not obliged to stoops to receive
his nourishment from it. ex Bruce lost
his grey ~~hounds~~ hounds, and all his mules
a few weeks after he arrived at this town.
They died he says without discovering any
outward marks of disease. The unwhole-
=someness of the air is confined to the rainy
season. As soon as it comes on the
inhabitants save their cattle by driving
them to some distance from the town. ~~so~~
the soil which emits this air is un-
=commonly favourable to the growth of
rice, wheat and millet, but no tree
~~flowers~~, except the Cocoa, will flowers,
~~will~~ nor grow in it. It is never overflowed
by the Nile. When lixiviated it affords
a good deal of Salt, the nature of which

is not mentioned by mr Bruce. In walk-
=ing over it he tells us he perceived pain-
=ing pains in his legs. There is a portion
of earth near the Scioto Settlement on
the Ohio river which proposes several of the
properties described by mr Bruce to the
Soil of Senaar. It proves fatal to dogs,
and in one instance it killed two puppies belong-
=ing to a mr Segrain who visited it.
Vii Hydrogen Gas sometimes mixes with
the air so as to become the cause of disease
and Death. Dr Franklin was affected with
an intermitting fever in consequence of
inhaling a portion of this air which was
discharged by agitating a pond of
stagnating water. It soon &
thus suddenly destroys life in subterraneous

V High walls protect from it, and heavy
rains destroy it.

carrion & Faeces; in which place it is called Chokk Damp. —

VIII There is a Wind known in the Eastern Countries by the name of Hasmattan or Samoom which sometimes proves sudden= =ly fatal to man and other Animals. ~~It is~~ It passes ~~=ing~~ over large beds of Bitumen which Abound with the Sulphuric Acid, ~~and~~ which the heat of the sun sets at liberty, and which by mixing with the air imparts to it its deleterious quality. ~~It~~ The fatal effects are avoided only by falling with the face upon the ground. Persons who are killed by it instantly in a few hours. No putrid ferment in this case is introduced into the body, for this Acid is of an antiseptic nature. I shall

V Kentucke emitted a Sulphurie fator
wh after an earthquake in the year
1811 which was distinctly perceived 150
yards off for some time after it. In a
thick settled country it w? probably have
produced disease.

hereafter receive this sudden putrefaction of
the body to the immense stimulus of the
Havannahan Wind Disorganizing every part
of the body by its action upon its sensible &
insitable fibres. —

IX ~~Vol~~ A Vapor is sometimes emitted from the
earth when torn by an earthquake which
mixes with the Air and produces diseases.
This was remarkably the case after the
earthquake ~~of~~ on the 7th of June 1692 in
Jamaica. Three thousand persons died of a
~~effects~~ fever produced by this Vapor a few
months afterwards. It had a very offensive
smell. A Spring of pure water ~~b~~ in V

X ~~Vol~~ A Vapor is said to be emitted sometimes
from Springs which Contaminates the Air.
This was the cause of one of the plagues
at Vienna, and of another in a town in

X

Insane. The Vapour it is said in the former case had an Offensive smell.

XI. Air is rendered unhealthy by being mixed with the sulphurie acid which is discharged from fosil coal during its inflamation in large fires. A Stranger from a Country where wood is used for fuel, soon feels of being affected by it a few days after he enters the cities of London or Edinburgh. It acts chiefly upon the lungs by exciting a cough. The late Dr Gardines of Charleston informed Dr Ramsay that the citizens of Charleston are determined to burn fosil coal instead of wood in their houses. Coughs became general thro' the city immediately afterwards in Consequence of which

the use of wood was restrid in all their
fireplaces. —
XII ~~The Air of a Room~~ in which wood or coal
is burnt in a Close Stove is Often un-
-healthy. It induces Head Ach in some
-people, and great Langour upon Others.
-Soon the same effects are being induced
in a room heated by a brick or China
Stove it has been proposed that the
~~wh~~ breath or perspiration alights upon
the Stove and is consumed by it, and hence
its unpleasant, or unhealthy effects.
Others ascribe these effects to the heat of the
Stove producing too much dryness
in the Air. What makes this latter Opinion
that placing an open Vessel of Water upon the
Stove which throws off Vapor into the

V A fine powder is emitted in the
grinding of Gypsum which is inhaled
by the lungs, where it often produces
pulmonary complaints. The floating
particles of flour create a Cough-
the frequency of that disease among
millers in all Countries.

room
~~Air~~ in proportion to the heat of the stove,
1
in a greater measure obviates all its
Disagreable &
^ morbid effects upon the body.

XIII The effluvia of certain manufactories
sometimes contaminate the Air, pecu-
liarly all those which disperse into
it the volatile parts of Arsenic, lead, or
Sulphur. The last substance viz Sulphur
has been said to induce mental as
well as bodily disease. Beyond ascribes
a part of the peculiar wilderness of the
inhabitants of ~~the~~ Naples
~~Neighbourhood of Vesuvius~~ to
^ their constantly inhaling more or less
of the ~~Vapours~~ Sulphurie Vapors emitted
by the Volcano in its neighbourhood. V

XIV Certain odors of ~~plants~~ flowers, - Spices - Gums
&c which float in the Air sometimes

in[illegible] disease, a Headache has been cured
on by the smell of Allspice. Persons of
delicate and visitable habits have shrietly
speaking, "died of a rose ~~of bruise~~
~~of violets~~ in Aromatic pain". The odor
of Rapsel Dr Virdet says nearly killed a
number of boys at Dresa, they were
saved by giving them large quantities
of wine.

XV Particles of sand which are diffused
in Egypt created
thro the air — the dust which is
by the wearing away of the shells which
pave the shores at Surinam, & the fine
pollen of plants which fills the air
in the State of Kentucke in the Spring
of the air, have all been known
to produce the Opthalmia. The

same disease has often been produced by the
smoke of wood in all Countries. It likewise
imparts to the Skin a sallow or Dark Color.
~~Particles from grinding Needles sometimes lacerate~~
Dr Beddoes has enumerated among the
Causes of Consumptives the irritation
induced in the lungs by the fine particles
which are emitted from needles in
grinding them so as to give them their
fine polish & thereby to fit them for
sale or exportation. ~~XVi to Li~~
I was consulted in the year 1809 by a Clergyman who
contracted a severe Disease in his lungs &
stomach by inhaling & swallowing a Quantity of fine
sand and dust which the wind blew
upon him while he was preaching in the
Open Air. The discharged by Coughing
some Days afterwards $\frac{1}{4}$ of a pound of sand
& dust cemented by mucus, and a large
quantity of both from his stomach by

means of emetics.

XVI I have said that stagnated air without any foreign matters being combined with it is sometimes a source of disease. [In support of this opinion I shall mention an experiment lately made by Mr Joseph Cloud of this city. He ~~fitted~~ closed a box that contained about five Gallons of air - perfectly air tight. After it had ~~stood~~ remained without the least motion for about a month he opened it, and in the presence of Mr Patterson V Provost and Prof of Natural Philosophy applied a lighted candle to the upper part of the box. The ~~by~~ blaze of the candle was instantly extinguished.

He then applied it in a lighted flate to
the lower part of the box. The blaze
was instantly rendered more vivid.
You will easily comprehend the
Cause of these phenomena; the
Roots of the air had ascended, & its oxygen
descended in the box agreeably to the natural & habitual
laws which govern them, in consequence of their
spontaneous separation from each other. This experiment is
an important one for 1: it proves the
component parts of the atmosphere to be
kept together by diffusion, and not by
mixture, and 2ly that motion or
agitation is indispensably necessary
to preserve their Union. Hence there

and advantages

we learn the final cause of ~~the~~ winds

~~&~~ ~~bir~~ ~~wind~~ storms. in every part of

the world. Our Globe would not be

habitable without them. We learn

further the reason why ~~bo~~ Cellars,

houses and Churches that have been

closely shut up for months or even weeks

~~excite~~ often become both the

remote and exciting causes of

head ache, Catarrh and fevers. Diseases

~~The Sickness~~

on board of Ships which are becalmed

for two or three weeks, probably arise

wholly from the diminution of the compo-

-nent parts of the Air. They have been

ascribed to the putrefaction of the feculent

parts of fish & Seaplants which are

are thrown up upon the surface of the Ocean, first we have proved ~~that liquidity~~ and putrefaction ~~are incompatible with~~ each Other in the history which we have given of the Origin of Corruscations that liquidity and putrefaction are incompatable with each Other. I shall hereafter apply this discovery of mine to the practice of Physic, particularly to the treatment of fevers. I again the prevalence of pestilential fevers has always been marked by ~~a Heavy~~ the ~~Absence of Wind. As fine Weather~~ Absence of Effluvia, or the Absence of Wind. Of this I shall mention a number ~~of instances in the great Plague~~

of instances in our next Lecture. 66

~~in London in 1665, & it was so in~~

~~the yellow fever of 1793 in Philad.a The~~

Division of the Component Particles

of the Air, in these cases added to the

influence of the miasmata which

produced those diseases. - Perhaps in

some Cases it may be the exclusive

Cause of them.

[mentioned formerly upon the

Authority of Baron Humboldt - a Plain in

South America in which Wind is un-

- known insomuch that its Indians

who inhabitants have not a name

for it; & yet no diseases are

produced by it. In this case habitement
Destroy its morbid effects, or the Vapor
exhaled from the waters of the two rivers
viz Osouche, or Black rivers may deprive
it of its noxious qualities. — Or possibly
the Baron may have been misinformed, ~~as~~
and there may be no foundation for
~~the supposed fact~~ what he believed and
~~so suggested~~ communicated. 7

V Dr Sydenham ascribed it to a mineral
exhalation from the bowels of the earth.

XVII

Hippocrates, Sydenham & many other writers ~~have often~~ mention in their works a certain Quality in the Air which they have all called an inflammatory or malignant Constitution of the Atmosphere. It has been ascribed to a superabundance of Oxygen in the Air by some physicians, but this is denied by the Chemists who say the proportion of Oxygen in the Air is the same in all Countries & in all places. Others have ascribed to the the Air being overcharged with electrical matter, but of this we have no proofs. However ignorant we may be of its ~~causes~~ the nature, of the matter which thus imparts to

V D

exh

the air a disposition to render diseases
unusually inflammatory or malignant,
most
many physicians, all
animals, and vegetables, may all na-
-ture has testimony to the certainty of
its existence. I shall mention the proofs
of this assertion in the concluding part
of our history of the laws of Epidemics.
At present it will only be necessary to
remark, that this inflamed constitution of
the air exists independantly of its sensible
qualities, and of course in all kinds of
weather. Of this Dr Huxham mentions
the following instances. "In August 1739
a great languor oppressed every body"
a great [illegible] probably from

V &

exh

the stimulus of this latent Insect in the
Air inducing Depression of the whole System.
~~to explain he adds~~ This Depression was
not confined to the human Species, for
the Doctor adds "the singing birds were
depressed, and even the Grasshopper was
mute." At the same time says the D^r. the
Weather was nearly as usual, Dark,
and Moist, with the Wind South West-
=ly" In the ~~same~~ months of August
1734 the Doctor says "Many birds died
in moulting, and scarcely was the noise
of the Grasshopper to be heard" probably
from the same State of the Atmosphere
which took place in the year 1739.

This influm[y] Constitution of the air some-
-times pervades the whole globe, but it is oft-
-ner confined to single countries, Cities &
towns. Now & then it seems like cold,
rain, hail Snow and storms to appear
in what are called veins or in a strip
of country. Limited by forests mountains or
rivers. It seldom pervades disease of
itself without the cooperation of mias-
-mata, or contagion. The yellow fever
which is the common bilious fever
exalted to its highest grade has not been
produced in a single instance in the United
States without the Cooperation of Kind-
-miasmata. This is a most consoling
Consideration under the pressure of

produced by them, compared with
the sensible qualities of the air particularly
its changes from heat to cold, and from
cold to heat. Two reasons may be given
for this - 1st the great aptitude of the body to
accommodate itself to any situation. 2nd
2ly the great and prompt disposition of the
air to relieve itself of all extraneous or foreign
matters. Of this, the following fact furnishes a
striking proof. At the Leadmines in Scotland,
the air is so much impregnated with a poisonous
effluvia ~~from the debris of the ores~~ the leadore,
that birds which fly ~~over~~ over them instantly
fall dead on every day of the week except
Sunday on which day the labourers cease to
work, and the air recovers its natural purity
and healthiness.

We may learn an important lesson
from many of the facts that have been men-
tioned in the history of the morbid effects of the
air, and that is, that the remote causes of a disease
seldom produce them without the

pestilential diseases. The influence, or malignant Constitution it is true, cannot be removed, nor changed by any means in our power, but the corrupting miasmata, may be removed and the pestilential diseases thus prevented. which are produced by them, the power These force and Danger of even contagious diseases may be lessened during the prevalence of this influence. Constitution of the atmosphere by a greater Degree of dyspitism than be proper or Necessary if those diseases depended on contagion only, without the additional stimulus of the influence matter in the Air.

After all that has been said of the unhealthy impregnations of the atmosphere, it is agreeable to observe how few Diseases comparatively speaking, are V

aid of an existing cause, and that both
of them may be avoided by prudence and
care, so as to prevent the formation of dis=
=ease. ——————